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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,623	06/12/2006	Christoph Weber	STT-C-PCT-US	2788

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HUDAK, SHUNK & FARINE, CO., L.P.A.
2020 FRONT STREET
SUITE 307
CUYAHOGA FALLS, OH 44221

EXAMINER	
SHECHTMAN, SEAN P	

ART UNIT	PAPER NUMBER
2125	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,623	WEBER ET AL.	
	Examiner	Art Unit	
	Sean P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 June 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/12/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-19 are presented for examination. Claims 1-19 have been amended.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show Fig. 2 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the chip removal machine comprising: a mechanical drive for a tool or a workpiece or a combination thereof, regulated by a control system, wherein the regulation comprises a plurality of values C, X, Z of at least three spatial axes c, x, z for the control system and for the drive, wherein the values C, X, Z have a functional relation f.sub.bi such as Z=f.sub.bi (C, X) with the axes c, x, z, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract of the disclosure is objected to because it contains a list of reference symbols. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 18, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See

MPEP § 2173.05(d). For purposes of examination, it will be assumed that the claims recite "the values C, X, Z have a functional relation f.sub.bi with the axes c, x, z".

Referring to claim(s) 1, 17, 18, line(s) 9-11, 5, 9-11, it is unclear if the explanatory materials within parenthesis are intended to be claim limitations or examples of what could be considered a plurality of control system actual values detected by measuring means or selected drive actual values. For purposes of examination, it will be assumed that the explanatory materials within parenthesis are not within parenthesis and limit the claim to define C.sub.p,s, X.sub.p,s, Z.sub.p,s as the plurality of control system actual values, and to define C.sub.p,a, X.sub.p,a, Z.sub.p,a as the selected drive actual values.

Referring to claim 1, 18, the variables Z.sub.bi,s, Z.sub.bi,a, D.sub.z,s, D.sub.z,a, have not been defined by the claim. For purposes of examination, it will be assumed that Z.sub.bi,s is a control system nominal value, Z.sub.bi,a is a drive nominal value, D.sub.z,s is a control system differential value, and D.sub.z,a is a drive differential value.

Referring to claim 2, the variable D.sub.z,a.sup..phi. has not been defined by the claim. It will be assumed D.sub.z,a.sup..phi. is a contouring differential value.

Claim 2 recites the limitation " the generated lens contour " in line 8. There is insufficient antecedent basis for this limitation in the claim. It will be assumed that the generated lens contour is a generated lens contour.

Referring to claim 3, the claim recites that the determination of Z.sub.bi,a.sup..phi. is performed in increments, however claim 2 appears to use only one value for Z.sub.bi,a.sup..phi., therefore it is not clear which value, of those values calculated by increments, is the value for

Z.sub.bi,a.sup..phi. For purposes of examination, it will be assumed that claim 2 recites plural values of Z.sub.bi,a.sup..phi. are determined.

Claim 4 recites the limitation "the contouring differential values" in line 3. There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be contouring differential values.

Referring to claim 4, the claim recites computing one peak-to-valley value, however there appears to be numerous peak-to-valley values computed, therefore, it will be assumed that this limitation is recited in the alternative.

Referring to claim 4, the variables D.sub.z,s,ptv, D.sub.z,a,ptv, D.sub.z,a.sup..phi..sub.ptv, have not been defined by the claim. It will be assumed that D.sub.z,s,ptv is a peak-to-valley value for the control system and D.sub.z,a,ptv, D.sub.z,a.sup..phi..sub.ptv are peak-to-valley values for the drive.

Claim 4 recites the limitation "the respective measurement" in line 11. There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be the respective calculation.

Claim 4 recites D.sub.z,s/a,min corresponds to the minimum and D.sub.z,s/a,max to the maximum differential value of the respective calculation, however the calculation is of a value and it is unclear how a value can have a minimum and a maximum. It will be assumed that claim 4 recites that said calculating is of plural values.

Claim 4 recites the limitation "the respective position" in line 12. There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be a respective position.

Referring to claim 5, the variable D.sub.z,a.sup.f has not been defined. It will be assumed that D.sub.z,a.sup.f is the error differential value.

Claim 8 recites the limitation " the respective workpiece position " in line 5. There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be a respective workpiece position.

Claim 12 recites the limitation " the peak-to-valley value D.sub.x/c,a,ptv, D.sub.x/c,a.sup..phi..sub.ptv, D.sub.x/c,s,ptv, D.sub.x/c,s.sup..phi..sub.ptv, the error differential value D.sub.x/c,a.sup.f, D.sub.x/c,s.sup.f or the contouring differential value D.sub.x/c,s.sup..phi., D.sub.x/c,a.sup..phi. ". There is insufficient antecedent basis for this limitation in the claim. It will be assumed claim 12 depends on claims 4 or 5.

Claim 13 recites the limitation " the chip removal machining " in line 3-4. There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be a chip removal machining.

Claim 15 recites the limitation " the Cartesian system of coordinates or into the polar system of coordinates ". There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be a Cartesian system of coordinates or into a polar system of coordinates.

Claim 17 recites the limitation " the various machine parameters " in line 6. There is insufficient antecedent basis for this limitation in the claim. It will be assumed the various machine parameters is various machine parameters.

Referring to claim 18, claims in which both an apparatus and the method steps of using the apparatus is indefinite under 35 USC 112, second paragraph. This type of claim is indefinite because it fails to positively recite the boundaries sought for protection. The metes and bounds

of the claim cannot be determined because it is unclear as to which category of subject matter is sought for protection, i.e., the method or the apparatus.

Claim 19 recites the limitation "the representation of the values" in line 2-3. There is insufficient antecedent basis for this limitation in the claim. It will be assumed to be a representation of the values.

Due to the number of 35 USC § 112 rejections, the examiner has provided a number of examples of the claim deficiencies in the above rejections, however, the list of rejections may not be all inclusive. Applicant should refer to these rejections as examples of deficiencies and should make all the necessary corrections to eliminate the 35 USC § 112 problems and place the claims in proper format.

Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 14-16, 18, are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/37168 to Drain (hereinafter referred to as Drain), supplied by applicant.

Referring to claims 1, 18, Drain teaches a method/system for determining a deviation of at least one regulating variable on a chip removal machine with a mechanical drive for a tool or a

workpiece (Page 5, lines 1-31, tool, workpiece, actuators), regulated by a control system, wherein the regulation comprises a plurality of values C, X, Z of at least three spatial axes c, x, z for the control system and for the drive, and the values C, X, Z have a functional relation f.sub.bi with the axes c, x, z, (Page 4, lines 15-35, controlled motion along Z, C, Z' and X) comprising the steps of:

preparing a protocol from a plurality of control system actual values C.sub.p,s, X.sub.p,s, Z.sub.p,s detected by measuring means (Page 6, lines 29 – Page 7, line 2Page 5, lines 7-9, encoder 20; Page 5, lines 11-14, encoder 26; Page 5, lines 16-18, encoder 32; Page 5, lines 21-23, encoder 38; and/or Page 10, lines 6-11, commanded Z and Z' from commanded values X and C passed to functions) or selected drive actual values C.sub.p,a, X.sub.p,a, Z.sub.p,a,

calculating a control system nominal value according to Z.sub.bi,s=f.sub.bi (C.sub.p,s, X.sub.p,s) at least in relation to the z-axis (Page 9, line 21 – Page 10, line 11, f1 or f2), and

calculating a control system differential value according to D.sub.z,s=Z.sub.p,s-Z.sub.bi,s at least in relation to the z-axis (Page 10, lines 16-23, subtracting Zmean from Z1 to Zn, where Zmean is a function of Z1-Zn).

14. The method for a chip removal machine for the production of optical lenses from plastic according to claim 1 (Page 2, lines 9-34).

15. The method according to claim 1, wherein one converts the values C, X, Z of the axes c, x, z into a Cartesian system of coordinates or into a polar system of coordinates (Page 2, lines 1-8, points file; Page 7, lines 13-27).

16. The method according to claim 1, wherein one starts from a theoretical cutting point of an ideal point-like tool (Page 16, lines 6-15) and convert the values C, X, Z of the axes c, x, z

(Page 2, lines 1-8, points file; Page 7, lines 13-27) for use of a circular carbide tip (Page 6, lines 2-6), with the circular carbide tip having a center point corresponding to the theoretical cutting point (Page 7, lines 22-27).

Allowable Subject Matter

8. Claims 2-13, 17, 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Referring to claim 2, neither Drain nor the prior art of record, taken either alone or in obvious combination disclose that at least for the drive and the z-axis a contouring differential value is determined according to

D.sub.z,a.sup..phi.=Z.sub.p,a-Z.sub.bi,a.sup..phi.

with

Z.sub.bi,a.sup..phi.=f.sub.bi(C.sub.p,a+.DELTA..phi., X.sub.p,a),

where the value .DELTA..phi. corresponds to a phase shift of the c-axis, which results in a torsion of the generated lens contour, wherein plural values of Z.sub.bi,a.sup..phi. are determined. Claims 3-4, 7-13, 17, 19 depend from claim 2 and are therefore also allowable.

Referring to claim 5, neither Drain nor the prior art of record, taken either alone or in obvious combination disclose that one determines an error differential value according to D.sub.z,a.sup.f=Z.sub.p,a-Z.sub.bi,a.sup.f with Z.sub.bi,a.sup.f=f.sub.bi(C.sub.p,s, X.sub.p,s) at least for the drive and at least in relation to the z-axis.

Referring to claim 6, neither Drain nor the prior art of record, taken either alone or in obvious combination disclose the function f.sub.bi is a 3D bicubic surface spline or a spiral spline.

It is for these reasons that applicant's invention defines over the prior art of record.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman Sean Shechtman

June 4, 2007 6/4/07